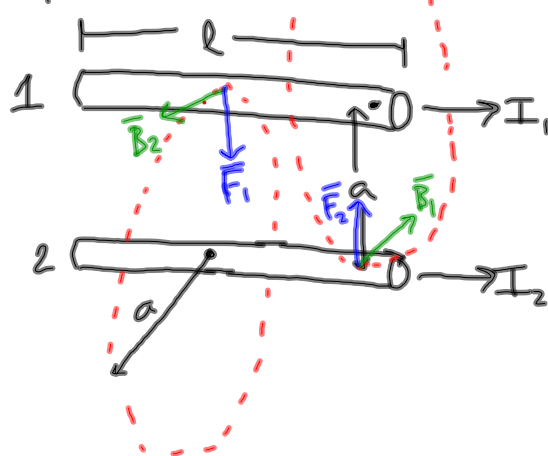


Quiz Monday:

Moving charges in \vec{B} fields

Magnetic force and fields
of current-carrying wire

Magnetic Force Between Two Parallel Conductors:



\vec{F}_1 is the force produced on wire 1 from \vec{B}_2

\vec{F}_2 is the force produced on wire 2 from \vec{B}_1

$$\vec{F}_1 = I (\vec{l} \times \vec{B}_2)$$

$$B_2 = \frac{\mu_0 I_2}{2\pi r} \quad F_1 = I_1 l B_2$$

$$r = a \quad = \frac{\mu_0 I_1 I_2 l}{2\pi a}$$

$$\frac{F_1}{l} = \frac{\mu_0 I_1 I_2}{2\pi a}$$